Heating & Air Conditioning
Amana®
Comfort. Quality. Trust.

GUSA

Two-Stage High Efficiency Gas-FiredFurnace

Specification Sheet

Affix this Specification Sheet, Installation Instructions, and Users Information Manual adjacent to the unit.

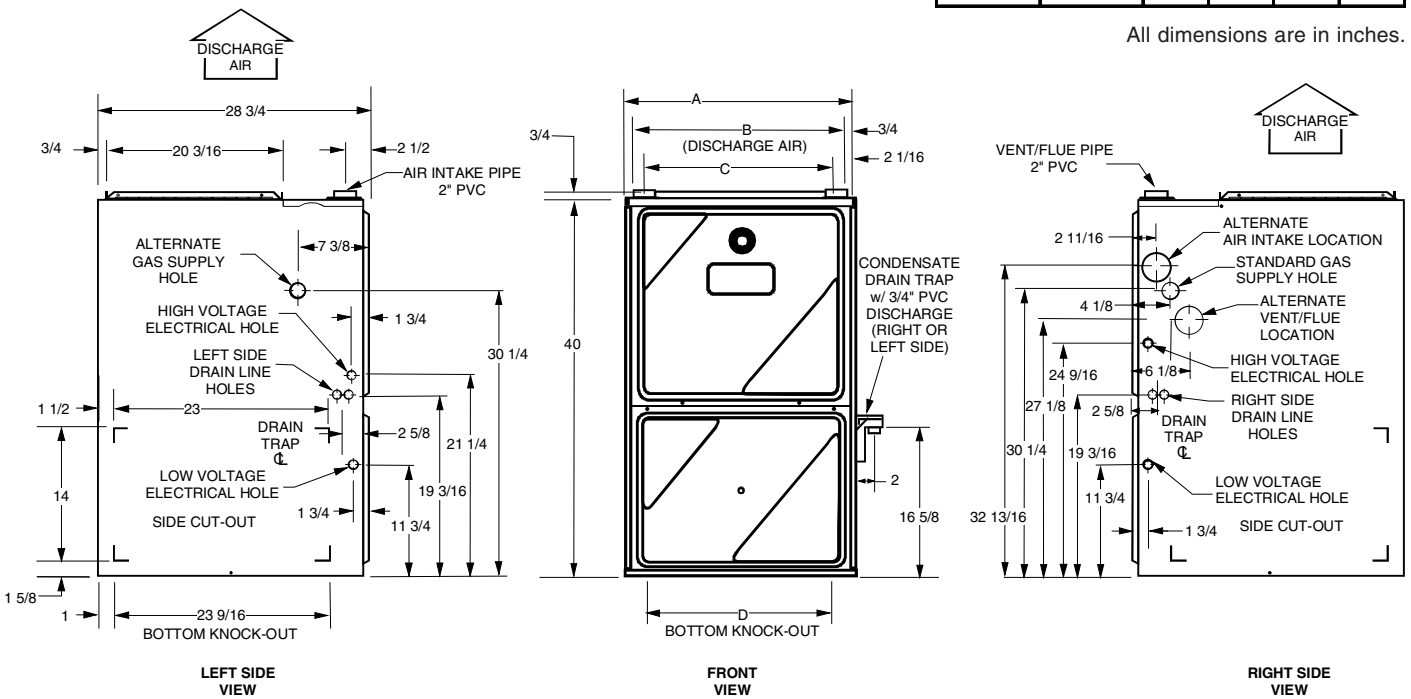
Model Number	High Fire Rates		Low Fire Rates		Rated AFUE	Temp. Rise Range (°F)	Number of Burners	Minimum[1] Circuit Ampacity (Amps)	Maximum[2] Overcurrent Protection (Amps)	Circulator Blower		Tons AC at 0.5" ESP	Pressure[3] Switch Settings			Shipping Weight (lbs)
	Input (Btu/hr)	Output (Btu/hr)	Input (Btu/hr)	Output (Btu/hr)						Size (D" x W")	HP		ID Blwr (Low)	ID Blwr (High)	Front Cover	
GUSA070BX35	69,000	65,200	48,000	45,200	92.0	35 - 65	3	7.1	15.0	11 X 7	1/2	1.5 - 3.0	-0.20	-0.55	-0.37	145
GUSA090BX40	92,000	87,300	64,000	60,000	92.0	35 - 65	4	6.4	15.0	11 X 9	1/2	1.5 - 4.0	-0.20	-0.55	-0.37	167
GUSA090BX50	92,000	86,000	64,000	59,800	92.0	35 - 65	4	9.0	15.0	11 X 10	3/4	2.0 - 5.0	-0.20	-0.55	-0.37	175
GUSA115BX50	115,000	109,100	80,000	76,100	92.0	35 - 65	5	8.0	15.0	11 X 10	3/4	2.0 - 5.0	-0.20	-0.55	-0.37	188

[1] Minimum Circuit Ampacity = (1.25 x Circulator Blower Amps) + ID Blower Amps.
[2] Maximum Overcurrent Protection refers to maximum recommended fuse or circuit breaker size.
[3] As shipped for installations below 7000 feet.

Cabinet Size	Units	A	B	C	D
Small	070__35	16-1/2	15	12-3/8	12-5/8
Medium	090__40	20-1/2	19	16-3/8	14-5/8
Large	090__50 115__50	24-1/2	23	20-3/8	18-5/8

Dimensions (Inches)

All dimensions are in inches.



WARNING

To avoid death, personal injury or property damage due to fire, do not exceed maximum recommended fuse or circuit breaker size.

Due to continuous engineering design and development, the information in this spec sheet is subject to change without notice.

Amana
1810 Wilson Parkway • Fayetteville, TN 37334

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GUSA Blower Performance																				
(Model Heating Speed As Shipped)	Motor Speed	Tons AC at 0.5" ESP	External Static Pressure, (Inches Water Column)																	
			0.1			0.2			0.3			0.4			0.5			0.6	0.7	0.8
			CFM	Low Fire Rise	High Fire Rise	CFM	Low Fire Rise	High Fire Rise	CFM	Low Fire Rise	High Fire Rise	CFM	Low Fire Rise	High Fire Rise	CFM	Low Fire Rise	High Fire Rise	CFM	CFM	CFM
	HIGH	3.5	1621	---	37	1572	---	38	1521	---	39	1469	---	40	1407	---	42	**1343**	**1276**	**1205**
GUSA070BX35	MED	3.0	1402	---	42	1366	---	43	1329	---	45	1290	---	46	1243	---	48	**1185**	**1133**	**1060**
(HIGH FIRE: Med-Lo)	MED-LO	2.5	1144	36	52	1122	37	53	1086	38	55	1063	39	56	1024	40	58	**981**	**940**	**875**
(LOW FIRE: Low)	LOW	2.0	868	48	---	831	50	---	805	51	---	782	53	---	745	55	---	**703**	**667**	**619**
	HIGH	4.0	1821	30	44	1768	31	45	1699	32	47	1624	34	49	1544	36	51	**1439**	**1354**	**1227**
GUSA090BX40	MED	3.5	1624	34	49	1561	35	51	1520	36	52	1461	38	54	1381	40	57	**1297**	**1217**	**1109**
(HIGH FIRE: Med)	MED-LO	3.0	1395	40	57	1363	40	58	1311	42	60	1258	44	63	1201	46	---	**1120**	**1045**	**957**
(LOW FIRE: Low)	LOW	2.5	1212	45	65	1164	47	---	1126	49	---	1080	51	---	1014	54	---	**957**	**882**	**815**
	HIGH	5.0	2090	---	38	2076	---	38	2061	---	38	2054	---	39	2017	---	39	**1963**	**1901**	**1820**
GUSA090BX50	MED	4.5	1615	---	49	1610	---	49	1600	---	50	1591	---	50	1562	35	51	**1523**	**1473**	**1410**
(HIGH FIRE: Med-Lo)	MED-LO	3.5	1367	40	58	1367	40	58	1356	41	58	1351	41	59	1345	41	59	**1298**	**1252**	**1177**
(LOW FIRE: Low)	LOW	3.0	1191	46	---	1182	47	---	1166	47	---	1141	48	---	1115	49	---	**1061**	**1014**	**965**
	HIGH	5.0	2181	---	45	2117	---	47	2073	---	48	2021	---	49	1976	---	50	**1913**	**1831**	**1746**
GUSA115BX50	MED	4.5	1693	41	58	1666	41	59	1647	42	60	1600	43	62	1562	44	63	**1522**	**1471**	**1408**
(HIGH FIRE: Med)	MED-LO	3.5	1489	46	---	1454	47	---	1428	48	---	1397	49	---	1365	50	---	**1328**	**1270**	**1214**
(LOW FIRE: Low)	LOW	3.0	1299	53	---	1275	54	---	1250	55	---	1224	56	---	1188	58	---	**1161**	**1105**	**1059**

NOTES:

- Blower speeds for each firing rate are set independently.
- All furnaces ship as high speed for cooling. Installer must adjust blower speed as needed.
- For most jobs, about 400 CFM per ton when cooling is desirable.
- This chart is for furnaces installed at 0 - 4000 feet. At higher altitudes, a properly derated unit will have the same temperature rise at a particular CFM, while the ESP at that CFM will be lower.
- The shaded area ( )indicates ranges in excess of maximum external static pressure allowable when heating. For satisfactory operation, external static pressure should not exceed 0.5" W.C. The data for 0.6" W.C. to 0.8" W.C. is shown for air conditioning purposes only.
- The dashed (-----) areas indicate a temperature rise not recommended for this model.
- The installation must be adjusted to obtain a temperature rise within the range listed on the furnace nameplate.

STANDARD ALTITUDE INSTALLATIONS

For installations above 7,000 feet, please refer to your Amana distributor for required kit(s).

Gas	Altitude	Kit	Orifice	Manifold Pressure		Pressure Switch Change
				High Stage	Low Stage	
Natural	0-7000	None	#43	3.5" w.c.	1.9" w.c.	None
Propane	0-7000	LPTK09	#55	10.0" w.c.	6.0" w.c.	None

Note: In Canada, gas furnaces are certified to 4500 feet.

When installing this furnace refer to the High Altitude Chart for proper high altitude kit, if required, and gas manifold pressure.

FLAME SENSOR

Flame sensor output is 1 to 4 microamps at 115 volts.

MINIMUM CLEARANCES

WARNING

To avoid death, personal injury or property damage due to fire, clearances to combustible surfaces listed as below must be observed.

Service Accessibility and Unit Connections

- 36 inches front clearance is required for servicing or cleaning.
- Unit connections (electrical, flue, and drain) may necessitate greater clearances than the minimum clearances listed below.

NOTE: In all cases, accessibility clearance must take precedence over clearances from the enclosure where accessibility clearances are greater.

Minimum Clearances To Combustible Materials (inches)						
POSITION*	**SIDES**	**FRONT**	**REAR**	**TOP**	**BOTTOM**	**FLUE**
Upflow	0	3	0	1	C	0
Horizontal	6	3	0	6	C	0

* = All positioning is determined as installed unit is viewed from the front.

C = If placed on combustible floor, floor MUST be wood ONLY.

FILTERS

NOTE: Filters are required with this furnace and must be provided by the installer. The filters used must comply with UL900 or CAN/ULCS111 standards. Installing this furnace without filters will void the unit warranty.

This furnace has provisions for the installation of return air filters at the side and/or bottom return. The furnace will accommodate the following filter sizes depending on cabinet size:

Side Return(s)		
Cabinet Width (in.)	Nominal Filter Size (in.)	Approx. Flow Area (in^2)
All	16 x 25 x 1	400

Bottom Return		
Cabinet Width (in.)	Nominal Filter Size (in.)	Approx. Flow Area (in^2)
16-1/2	14 x 25 x 1	350
20-1/2	16 x 25 x 1	400
24-1/2	20 x 25 x 1	500

Refer to Minimum Filter Area tables to determine filter area requirement. **NOTE:** Filters can also be installed elsewhere in the duct system such as a central return.

Disposable Minimum Filter Area (in^2)

[Based on a 300 ft/min filter face velocity]

(Input_Airflow)		Cooling Airflow Requirement (CFM)					
		800	1000	1200	1400	1600	2000
	070__35	564*	564*	564*	762	---	---
	090__40	---	752*	752*	752*	768	---
	090__50	---	---	752*	752*	768	960
	115__50	---	---	940*	940*	940*	960

*Minimum filter area dictated by heating airflow requirement.

Permanent Minimum Filter Area (in^2)

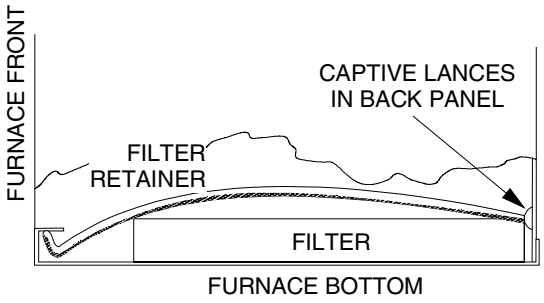
[Based on 600 ft/min filter face velocity]

(Input_Airflow)		Cooling Airflow Requirement (CFM)					
		800	1000	1200	1400	1600	2000
	070__35	282*	282*	282*	336	---	---
	090__40	---	376*	376*	376*	384	---
	090__50	---	---	376*	376*	384	480
	115__50	---	---	470*	470*	470*	480

Minimum filter area dictated by heating airflow requirement.

NOTE: Filters are required with this furnace and must be provided by the installer. The filters used must comply with UL900 or CAN/ULCS111 standards. Installing this furnace without filters will void the unit warranty.

The figure below shows how the filter is retained over the bottom return air opening.



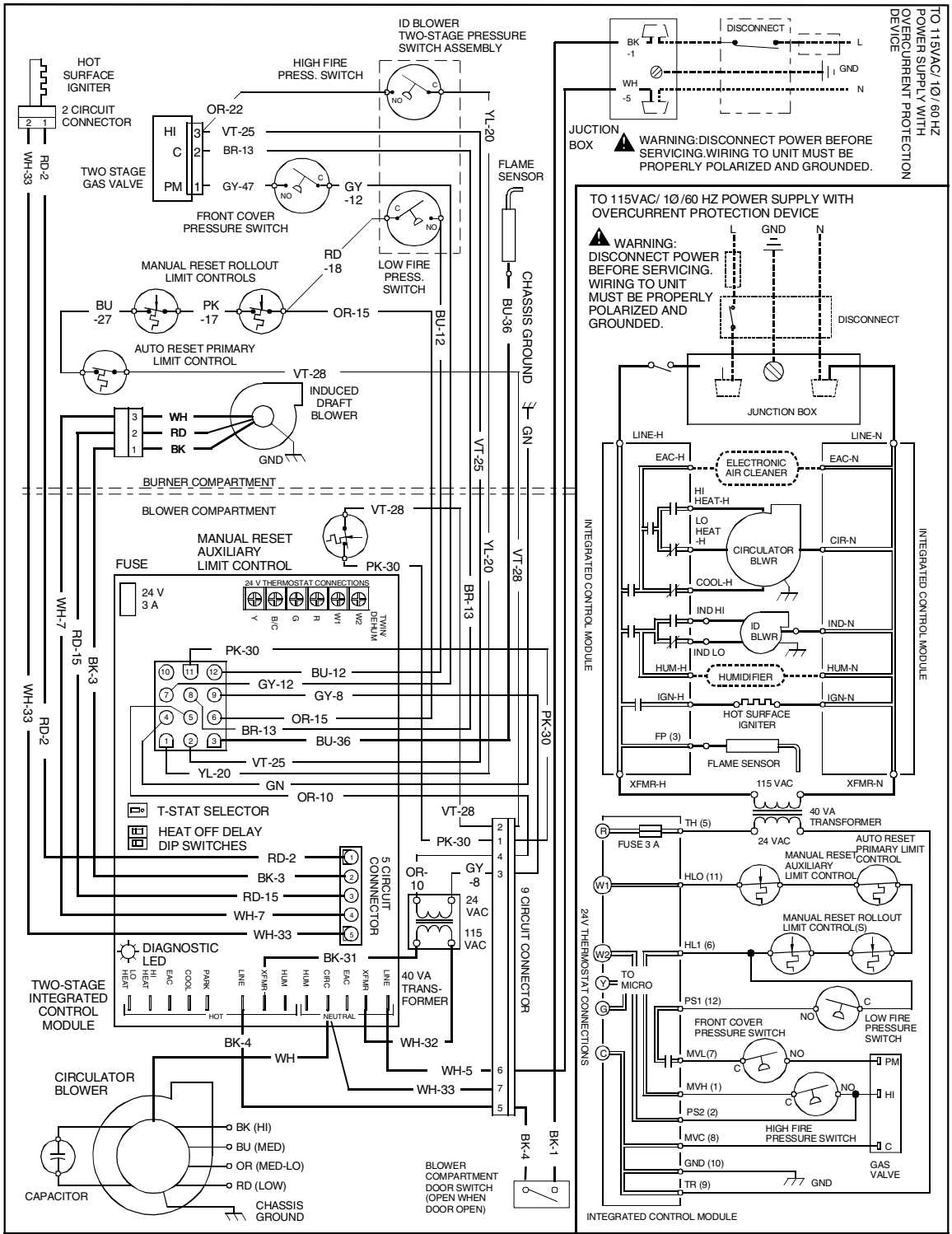
Cut Away Side View of Bottom Return Wire Filter Retainer

IMPORTANT NOTES:

1. All furnaces have a redundant gas valve and blower door interlock switch.
2. All furnaces are manufactured for use on 115 VAC, 60 Hz, single phase electrical supply.
3. **IMPORTANT:** While the data is presented as a guide, it is required to properly size fuses and wires and make electrical connections in accordance with the National Electrical Code and/or all existing local codes.
4. Performance figures are based on Department of Energy information and requirements under continuous operating conditions. Performance will vary with weather conditions and use.
5. Drain connections must conform to local codes.

⚠ WARNING

To prevent death, personal injury or property damage due to electrical shock, disconnect electrical power to this furnace before servicing or performing maintenance.



0 STEADY ON = REPLACE CONTROL
1 1 FLASH = SYSTEM LOCKOUT (RETRIES/RECYCLES EXCEEDED)
2 2 FLASHES = LOW FIRE PRESSURE SWITCH STUCK CLOSED
3 3 FLASHES = LOW FIRE PRESSURE SWITCH STUCK OPEN
4 4 FLASHES = THERMAL PROTECTIVE DEVICE OPEN
6 6 FLASHES = 115 VOLT AC POWER REVERSED
7 7 FLASHES = LOW FLAME SENSE SIGNAL
8 8 FLASHES = CHECK IGNITER OR IMPROPER GROUNDING
9 9 FLASHES = HIGH FIRE PRESSURE SWITCH STUCK OPEN
C CONTINUOUS FLASHES = UNANTICIPATED FLAME PRESENT

LOW VOLTAGE (24V)
LOW VOLTAGE FIELD
HI VOLTAGE (115V)
HI VOLTAGE FIELD
JUNCTION
TERMINAL
INTERNAL TO INTEGRATED CONTROL
PLUG CONNECTION

EQUIPMENT GND
FIELD GND
FIELD SPLICE
SWITCH (TEMP.)
IGNITER
SWITCH (PRESS.)
OVERCURRENT PROT. DEVICE

COLOR CODES:

YL	YELLOW	PK	PINK
OR	ORANGE	BR	BROWN
VT	VIOLET	WH	WHITE
GN	GREEN	BU	BLUE
BK	BLACK	GY	GRAY
		RD	RED

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NOTES:
1. SET HEAT ANTICIPATOR ON ROOM THERMOSTAT AT 0.7 AMPS.
2. MANUFACTURER'S SPECIFIED REPLACEMENT PARTS MUST BE USED WHEN SERVICING.
3. IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THE FURNACE MUST BE REPLACED, IT MUST BE REPLACED WITH WIRING MATERIAL HAVING A TEMPERATURE RATING OF AT LEAST 105°C. USE COPPER CONDUCTORS ONLY.
4. UNIT MUST BE PERMANENTLY GROUNDED AND CONFORM TO N.E.C. AND LOCAL CODES.